

IN THE CLAIMS

Please amend Claims 1, 2, 3, 6, 10 and 11 as follows:

1. (Twice Amended) A lateral transistor comprising:
- 2H, 2C
a semiconductor substrate of the first conductivity type;
- with clear
a buried region of the second conductivity type disposed on said semiconductor substrate;
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a uniform base region of the second conductivity type disposed on said first buried region, the uniform base region having a uniform lateral doping profile, the lateral doping profile being measured along a lateral direction parallel to the top surface of said semiconductor substrate;
- a plug region of the second conductivity type disposed in said uniform base region, the plug region protrudes from a top surface of said uniform base region so as to reach to said buried region;
- first and second main electrode regions of the first conductivity type disposed in and at the top surface of said uniform base region, the first and second main electrode regions being aligned in the lateral direction; and
- a graded base region of the second conductivity type disposed in said uniform base region, enclosing bottom and side of said first main electrode region such that said first main electrode region is disposed in the center at the top surface of the graded base region, the graded base region having a doping profile such that impurity concentration decreases gradually along the lateral direction towards said second main electrode region from said first main electrode region,
- wherein a combination of said uniform base region and said graded base region serves as a base region.

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2. (Twice Amended) The lateral transistor of claim 1, wherein said second main electrode region is formed in a frame shape along the top surface of said uniform base region, configured such that said second main electrode region laterally surrounds said graded base region.

3. (Once Amended) The lateral transistor of claim 2, wherein said second main electrode region is formed in a rectangular frame shape.

6. (Twice Amended) A semiconductor integrated circuit including a lateral transistor, the lateral transistor comprising:

a semiconductor substrate of the first conductivity type;

a first buried region of the second conductivity type disposed on said semiconductor substrate;

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a uniform base region of the second conductivity type disposed on said first buried region, the uniform base region having a uniform lateral doping profile, the lateral doping profile being measured along a lateral direction parallel to the top surface of said semiconductor substrate;

a first plug region of the second conductivity type disposed in said uniform base region, the first plug region protrudes from a top surface of said uniform base region so as to reach to said first buried region;

first and second main electrode regions of the first conductivity type disposed in and at the top surface of said uniform base region, the first and second main electrode regions being aligned in the lateral direction; and

a graded base region of the second conductivity type disposed in said uniform base region, enclosing bottom and side of said first main electrode region such that said first main electrode region is disposed in the center at the top surface of the graded base region, the graded base region has a doping profile such that impurity concentration decreases gradually

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amd. along the lateral direction towards said second main electrode region from said first main electrode region,

wherein a combination of said uniform base region and said graded base region serves as a first base region of said lateral transistor.

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amd. 10. (Twice Amended) The lateral transistor of claim 7, wherein said second main electrode region is formed in a frame shape along the top surface of said uniform base region, configured such that said second main electrode region laterally surrounds said graded base region.

11. (Once Amended) The lateral transistor of claim 10, wherein said second main electrode region is formed in a rectangular frame shape.

Cancel Claims 14-19 without prejudice.